

Special Initiatives Report  
No. 7

---

**National Health  
Accounts:  
Summaries of Eight  
National Studies in  
Latin America and  
the Caribbean**

*May 1998*



Partnerships  
for Health  
Reform

 Abt Associates Inc. # 4800 Montgomery Lane, Suite 600  
Bethesda, Maryland 20814 # Tel: 301/913-0500 # Fax: 301/652-3916

*In collaboration with:*

Development Associates, Inc. # Harvard School of Public Health #  
Howard University International Affairs Center # University Research Corporation



Partnerships  
for Health  
Reform

## Mission

*The Partnerships for Health Reform Project (PHR) seeks to improve people's health in low- and middle-income countries by supporting health sector reforms that ensure equitable access to efficient, sustainable, quality health care services. In partnership with local stakeholders, PHR promotes an integrated approach to health reform and builds capacity in the following key areas:*

- ▲ *better informed and more participatory policy processes in health sector reform;*
- ▲ *more equitable and sustainable health financing systems;*
- ▲ *improved incentives within health systems to encourage agents to use and deliver efficient and quality health service; and*
- ▲ *enhanced organization and management of health care systems and institutions to support specific health sector reforms.*

*PHR advances knowledge and methodologies to develop, implement, and monitor health reforms and their impact, and promotes the exchange of information on critical health reform issues.*

**May 1998**

### Recommended Citation

Partnerships for Health Reform Project. May 1998. *National Health Accounts: Summaries of Eight National Studies in Latin American and the Caribbean*. Special Initiatives Report No. 7. Bethesda, MD: Partnerships for Health Reform Project, Abt Associates Inc.

For additional copies of this report, contact the PHR Resource Center at [PHR-InfoCenter@abtassoc.com](mailto:PHR-InfoCenter@abtassoc.com) or visit our website at [www.phrproject.com](http://www.phrproject.com).

**Contract No.:** HRN-5974-C-00-5024-00  
**Project No.:** 936-5974.13  
**Submitted to:** USAID/LAC Bureau

and: Robert Emrey, COTR  
Health Policy and Sector Reform Division  
Office of Health and Nutrition  
Center for Population, Health and Nutrition  
Bureau for Global Programs, Field Support and Research

---

# Abstract

National Health Accounts (NHA) are a tool for estimating total financial expenditure on health care in a country over a defined period of time. Although the procedure is widely accepted, developed and developing countries share problems in determining NHA estimates: useful definition of terms and classifications of expenditure, reliable data sources, use of the NHA estimates in policy making. In addition, developing countries face new and different issues: lack of detailed information on health expenditures, different composition of expenditures, greater need for resource mobilization, and less attention of cost control concerns. Cross-country collaboration is one way in which individual countries can approach some of these challenges.

To this end, the Latin America and Caribbean National Health Accounts network was launched in 1997. A series of network workshops will culminate in June 1998 with presentation and discussion of case studies based on the experiences of the network's eight countries: Bolivia, Dominican Republic, Ecuador, El Salvador, Guatemala, Mexico, Nicaragua, and Peru. This report contains the executive summaries of those case studies. Each summary outlines the objectives for utilizing NHAs, presents principal results, discusses limitations, and proposes recommendations for policy and future NHA studies.



---

# Table of Contents

Table of Contents .....	iii
Acronyms .....	v
Foreword .....	vii
Acknowledgments .....	ix
1. Bolivia .....	1
1.1 Objectives of National Health Accounts .....	1
1.2 Steps in Completing the NHA Matrices .....	1
1.3 Results of the Study .....	1
1.4 Limitations of the Study .....	3
1.5 Recommendations and Conclusions .....	3
2. Dominican Republic .....	5
2.1 Objectives of National Health Accounts .....	5
2.2 Principal Results .....	6
2.3 Recommendations .....	6
3. Ecuador .....	9
3.1 Objectives of National Health Accounts .....	9
3.2 Principal Results .....	9
3.3 Limitations and Incomplete Results .....	11
3.4 Recommendations .....	12
4. El Salvador .....	13
4.1 Objectives of National Health Accounts .....	13
4.2 Principal Results .....	13
4.2.1 Health Sector Financing .....	13
4.2.2 Health Sector Spending .....	13
4.2.3 Limitations and Incomplete Results .....	14
4.3 Recommendations .....	14
5. Guatemala .....	17
5.1 Objectives of National Health Accounts .....	17
5.2 Principal Results .....	17
5.3 Limitations and Incomplete Results .....	18
5.4 Conclusions and Recommendations .....	18
6. Mexico .....	19
6.1 Objectives of National Health Accounts .....	19
6.2 Principal Results .....	19
6.3 Limitations and Incomplete Results .....	21

6.4	Recommendations .....	21
7.	Nicaragua .....	23
7.1	Objectives of National Health Accounts .....	23
7.2	Principal Results .....	23
7.2.1	Matrix 1 .....	23
7.2.2	Matrix 2 .....	24
7.2.3	Matrix 3 .....	24
7.2.4	Matrix 4 .....	25
7.3	Other Results .....	25
7.4	Limitations .....	26
7.5	Recommendations and Conclusions .....	26
8.	Peru .....	29
8.1	Objectives of National Health Accounts .....	29
8.2	Definition of the Sector .....	29
8.3	Coverage .....	29
8.4	Results .....	30
8.5	Principal Limitations .....	31
8.6	Recommendations .....	31

---

# Acronyms

<b>CGE</b>	<i>Contaduría General del Estado</i>
<b>GDP</b>	Gross Domestic Product
<b>IDSS</b>	<i>Instituto Dominicana de Seguridad Social</i>
<b>IESS/SSC</b>	<i>Instituto Ecuatoriano de Seguros Social/Seguro Social Campesino</i>
<b>IGSS</b>	<i>Instituto Guatemalteco de Seguridad Social</i>
<b>INSS</b>	<i>Instituto Nicaragüense de Seguridad Social</i>
<b>IPSS</b>	<i>Instituto Peruano de Seguridad Social</i>
<b>ISSS</b>	<i>Instituto Salvadoreño del Seguro Social</i>
<b>ISSSTE</b>	<i>Servicios Sociales de los Trabajadores del Estado</i>
<b>MIFIN</b>	<i>Ministerio de Financiación</i>
<b>MINSA</b>	<i>Ministerio de Salud</i>
<b>MSP</b>	<i>Ministerio de Salud Pública</i>
<b>MSPAS</b>	<i>Ministerio de Salud Pública y Asistencia Social</i>
<b>NGO</b>	Non-governmental Organization
<b>NHA</b>	National Health Accounts
<b>PEMEX</b>	<i>Petroleos Mexicanos</i>
<b>PROSAMI</b>	<i>Proyecto de Salud Materna y Supervivencia Infantil</i>
<b>SHCP</b>	<i>Secretaría de Hacienda y Crédito Público</i>
<b>SNS</b>	<i>Sistema Nacional de Salud</i>
<b>VIPFE</b>	<i>Viceministerio de Inversión Pública y Financiamiento Externo</i>





---

# Foreword

National Health Accounts (NHA) is a widely accepted method for estimating the total financial expenditure on health care in a country over a defined period of time. NHA is based on a feasible and useful definition of the boundaries of the health care sector. Health expenditures are analyzed based on a flow of funds framework and presented in the form of matrices linking sources of expenditure, financing intermediaries or agents, and a variety of breakdowns of the uses of expenditure.

Health care financing is of major policy import for all countries, although the specific problems and issues to be addressed by low- and middle-income countries are likely to differ from those in more advanced countries. Key issues include estimating the current level of aggregate financing for health care and the prospects for increasing health care funding in low spending countries; estimating the allocation of spending to priority health programs and population groups; and assessing the financial importance of key players in the health care system as a guide to the development of reform strategies. NHA has been shown to be a feasible and useful approach for understanding many health care financing issues in low- and middle-income countries.

Developing countries and advanced countries share certain problems in developing NHA estimates: Useful definitions of terms and classifications of expenditures need to be formulated. Reliable data sources need to be identified and improved over time. Decision makers must understand the value of NHA and see it being put to use to meet their needs.

In addition, many developing countries face some new and different issues: They may lack the extensive and detailed information on health care expenditures available in advanced countries. Systems vary greatly in the way health care is organized and the way expenditure data are collected, classified, and understood. The composition of health expenditure is also different, with more pluralistic and fragmented sources of financing and a larger share of total expenditure coming from households' out-of-pocket spending on ambulatory curative care services. Health policy priorities are also quite different. There is a greater need for attention to resource mobilization to meet more basic health needs. There are also pressing concerns about resource allocation to priority programs and distributional issues. There is less attention to overall cost control concerns.

While individual countries can address—and indeed have addressed—many of these questions on their own, significant benefits might be expected from cross-country collaboration in the development of national health accounts. A networking approach was proposed as a means to enable such cooperation. In the case of NHA, the network would bring together the technical representatives from a group of countries to learn about NHA methods; to formulate a common conceptual framework, comparable definitions, and data sources; and to collaborate in solving problems encountered in developing their individual NHA studies. The main output of a network would be each member country's national analysis. Comparative analyses of countries in the group would also be possible.

One strategy for establishing an NHA network is to seek the participation of a group of countries in the same region of the world. This would involve countries with a number of similarities: language, institutional structures (often reflecting similar colonial history), comparable levels of economic and social development, and common health patterns. This is the approach taken in this project. The first of these networks, the Latin America and Caribbean National Health Accounts (LACNHA) Initiative, was launched in 1997 and will complete its initial work in September 1998. The network included eight countries from the region: Bolivia, Dominican Republic, Ecuador, El Salvador, Guatemala, Mexico, Nicaragua, and Peru. With support from the United States Agency for International Development, the Partnerships for Health Reform (PHR) Project and the Pan-American Health Organization oversaw the implementation of the initiative and provided technical assistance to the country teams developing NHA estimations.

This technical report contains the executive summaries of the case studies written by the eight members of the LACNHA Initiative for the Third Regional Workshop, to be held in June 1998. The country's executive summary outlines the objectives for utilizing NHA, presents some principal results from the first round of reports, discusses the limitations of the study, and proposes recommendations for policy and future NHA studies. Based on workshop discussions, refinements will be made in country case studies. A comparative analysis of the LACNHA Initiative will be available in fall 1998.

Copies of the case studies (in Spanish) are available in the PHR Resource Center.

Peter Berman, Ph.D.  
Harvard School of Public Health

---

# Acknowledgments

The current publication was made possible thanks to the contributions of the National Health Accounts teams of Bolivia, Ecuador, El Salvador, Guatemala, Mexico, Nicaragua, Peru, and the Dominican Republic.

This work has been supported by the Pan American Health Organization/World Health Organization, the Partnerships for Health Reform Project, and the Harvard School of Public Health, with funding from the Latin America and Caribbean Initiative for Health Sector Reform of the United States Agency for International Development.



---

# 01. Bolivia

---

## 1.1 Objectives of National Health Accounts

To design and monitor the new policies and procedures associated with health sector reform, detailed information is needed on the total amount, sources, and flows of financing within the sector. The principal objective of National Health Financing and Expenditure Accounts (NHA) is to provide this information. On-going application of NHA will allow the monitoring and evaluation of both the sources and uses of the financial resources allocated to the sector; the methodology also will provide a relative measure of health system efficiency. Such analysis is important to a country that is planning or evaluating changes in this sector.

---

## 1.2 Steps in Completing the NHA Matrices

Listed below are the tasks performed in completing the NHA matrices that explain the behavior of health sector financing and spending:

- ▲ Determining the sources of health sector financing at an appropriate level of disaggregation
- ▲ Determining the financial agents of health spending
- ▲ Determining the allocation of these funds among the providers
- ▲ Quantifying these variables and measuring them in terms of the gross domestic product and other macroeconomic variables and indicators

---

## 1.3 Results of the Study

The most important source of financing for the Bolivian health sector—39 percent in 1995—is employer contributions from public and private companies and institutions. A system of health funds (*cajas de salud*) administers 96 percent of these resources.

The National Health Fund is the agency that allocates the most resources to the health sector and has the largest receivables. The public sector owes it significant sums of money for its employee contributions, but this does not prevent the Fund from continuing to provide care to public sector employees.

Households also make a significant contribution to health sector financing: 31 percent, or the equivalent of US\$88 million in 1995. This is noteworthy in that a large portion of these resources—approximately 91 percent—are “administered” by the households themselves, mostly via user fees paid to providers and for pharmaceuticals. The remaining 9 percent of financing

from households—2.5 percent of total financing—passes through private insurance companies and prepaid medical plans.

The government contributes 19.8 percent of total health care financing, on the national, departmental, and local levels.

Foreign sources contribute 9.7 percent of resources allocated to health through various agencies of the public subsector and non-governmental organizations (NGO).

Insurance companies account for only 0.86 percent of total resources, prepaid medical institutions for 1.62 percent.

The primary objective of public health is to improve health indicators by offering the entire population access to health care services; thus the role of public services is fundamental in achieving the coverage goals. To this end, the delivery of public services accounts for 29 percent of national health spending. Spending on the services provided by the health funds amounts to 38 percent.

Of the 31 percent of health care financing provided by households, 59 percent is spent on pharmaceuticals, the remainder on (unspecified) providers and related expenses.

Private for-profit services account for 11 percent of spending. The profit-making nature of these services limits the access that middle- and low-income populations have to these services. In this sector, just under 2.5 percent of health spending is from insurance companies and prepaid plans.

NGOs act as health care administrators and also as service providers. These institutions have their own centers and hospitals and operate primarily in the peripheral areas of large cities. Despite the small share of health spending that these organizations consume (4.1 percent), their work is recognized as very effective.

Traditional medicine is an important alternative in the country, especially in rural areas. However, it is difficult to assess it in monetary terms and it is underestimated due to different types of measurements (0.1 percent).

Health agents in Bolivia allocate a greater proportion of their spending to ambulatory services (31 percent) than to hospital services (30 percent) and prevention/promotion (less than 3 percent). It is very difficult to identify expenditures in the “others” column, despite their being the largest amount of resources (33 percent). In the case of the public subsector and the health funds, the “others” column includes administrative and project expenditures that cannot be disaggregated as proposed in the NHA matrix. For households, the US\$55.6 million in the “others” column represents spending on medications and transport.

In regard to the 3 percent spent on prevention and promotion programs, the public subsector spends the most, almost 94 percent in 1995.

The figures show that by type of spending, personnel services (i.e., compensation for labor), at 35 percent, is markedly greater than other items. In respect to the public sector and health funds alone, this percentage is even higher (50 percent). Spending for non-personnel services (light, water, and rent) constitutes 7 percent of the total.

The results generally show a low percentage allocated to investment in real assets (i.e., equipment and infrastructure), only 7.9 percent of total spending for 1995. This percentage is even lower for the health funds (social security) sector; in 1995, only 1.38 percent of their spending was for investment in real assets.

Materials and supplies receives 11 percent of spending, and part of this amount is allocated to purchase medications.

---

## 1.4 Limitations of the Study

There are some limitations in the results from the NHA study. It was initially reviewed in detail, and information from the General Accounting Office (*Contaduría General del Estado*, CGE) was refined to prevent double entry of the items considered. At the same time it was verified that the information was consistent with the definition of health spending that guides this document. Subsequently, this was consolidated with the information from the Vice-Ministry of Public Investment and External Financing (*Viceministerio de Inversión Pública y Financiamiento Externo*, VIPFE), which made it possible to obtain a more reliable data base. To ensure the validity of the results, the results were verified by comparing them with the data provided by the primary sources. Under-reporting problems were detected in the information relating to the Social Investment Fund (*Fondo de Inversión Social*); thus use was again made of the data provided by the fund itself, and this information was consolidated with the CGE-VIPFE base.

In Bolivia, gaining access to financial information from the private sector is still a strong obstacle to quantifying its share of national health spending. Even the corresponding public health agencies do not report this type of information, as in the case of the external financing they receive from non-governmental organizations. Therefore, the necessary coordination should be developed so that the studies on health spending or other similar studies will have the full support of the private sector, and in turn it will be the sector itself that contributes to making the information on health reliable, thus making it possible to improve decision making by all agents involved in the sector.

Collecting information from the public sector has run into some problems relating to data assessment and thus, as mentioned above, use was made of primary sources of information to corroborate and improve the study results. The Ministry of Health participated in reviewing the figures for that institution, and it would be very advisable to retain this type of commitment to achieving the necessary consensus.

---

## 1.5 Recommendations and Conclusions

The health funds are the principal providers of health care in Bolivia, covering the needs of workers and their dependents. However, a high saturation of services is noted, causing quality to be deficient and leading those with average incomes to seek alternatives for health care in the private sector.

The public sector, particularly the Ministry of Health, plays the leading role in implementing special prevention and health promotion programs. This work is national in scope and provided free of charge. It would be difficult for another sector of the economy to carry it out as it is not a profit-making activity.

The share of households in private spending continues to be the fundamental base of the sector. However, these expenditures are predominantly out-of-pocket. Households still do not consider as a feasible alternative the potential cost benefits to which they have access and which are provided by the services offered through prepaid medicine and the coverage offered by the insurance companies. These services are still selective in nature and this is shown in their share of private sector spending.

Within the structure of household health spending, spending on medications is considered the most important item, as households allocate approximately 60 percent of their budgets to cover this need. As can be expected, households continue to concentrate their spending, in terms of medical and hospital care, on directly paid profit-making services and not on alternative services such as NGOs, prepaid medicine, or other alternatives. These directly paid profit-making services absorb a significant amount of household spending on medical visits and hospitalization. Apparently, as has already been mentioned, insurance and prepaid medicine services are still not sufficiently attractive and accessible for households to use the health care provided by these agents.

Although private sector provision of services comprises a small percentage of all health services, its presence is significant. Increases in premiums going to public sector and health fund provision of services are not met by comparable increases in quality of those services. Consumers therefore seek out higher-quality private provision, even though they must pay out-of-pocket for it. This utilization of private providers has decreased the functional efficiency of public services by leaving them underutilized and thus with high unit costs.



---

## 02. Dominican Republic

---

### 2.1 Objectives of National Health Accounts

---

It is proposed that National Health Accounts will be used to determine the structure and financial flows of the health sector. These National Health Accounts make it possible to establish the following:

- ▲ The dimensions of the health sector
- ▲ Its different components
- ▲ Who controls the allocation of resources
- ▲ Who makes the payments and for what, and who receives the payments

Another objective of National Health Accounts is to improve sectoral policies. The availability of the information produced allows the authorities to make better decisions, so that health financing is more equitable and greater efficiency is achieved in the allocation of resources.

The third objective of National Health Accounts is to allow us to monitor the changes occurring in the sector as a result of the application of certain policies. This is especially important when the country is carrying out a process of reform, as is the case in the Dominican Republic. In this sense, these accounts will make it possible to establish starting points for measuring, among other things, the following:

- ▲ The effects of the reform
- ▲ The impact of the reforms on total costs
- ▲ The extent to which the goals of resource allocation have been achieved
- ▲ Who the beneficiaries of the reform are
- ▲ The extent to which sustainability has been attained

---

## 2.2 Principal Results

The preliminary estimate of the financing of national health spending in the Dominican Republic for 1996<sup>1</sup> indicates that in percentage terms the government contributes 14.9 percent, families contribute 79.2 percent, companies contribute 4.7 percent, and foreign aid contributes 1.2 percent of the country's total health spending.

According to these figures, national health spending accounts for 7 percent of gross domestic product (GDP), a percentage that is quite high within Latin America given that it is equal to that recorded by the richest countries in the region and similar to spending in various European countries. The contribution of families represents 5.5 percent of GDP, that of government 1 percent, and that of companies 0.3 percent.

This shows the low proportion covered by the government and the enormous burden that this places on families. In most countries, at least half of total spending is covered by the government. If to this we add the great inefficiencies seen in the delivery of government health services, it is likely that their impact is very limited in terms of improving the population's health conditions and the distribution of income.

In comparison with other countries, family spending is, in contrast, extremely high. If we recall that most of the population is uninsured and that these disbursements made by families represent out-of-pocket expenses, i.e., money that people have to deduct from their income to directly cover (and without reimbursement) these vital needs, these figures indicate that there is obviously a very serious problem of inequity in health financing in the country.

In effect, if we refer to health insurance coverage, for 1996 we have the following figures: 80.5 percent of the population has no insurance, 5 percent is insured by the Dominican Social Security Institute (*Instituto Dominicana de Seguridad Social*, IDSS), 12 percent has private insurance, and 1.7 percent has some other type of insurance.

Half of Dominican families are hospitalized in private clinics and the other half are hospitalized primarily in the hospitals of the Department of Public Health (*Secretaría del Estado de Salud Pública*). A minority uses military and IDSS hospitals. Nearly one-third of the country's poorest population uses private clinics. This is really surprising, because it is not assumed that such groups use them if they are not insured, since, as we have said, it is the family that must cover this expense. This fact suggests that there is some lack of trust in the public health system.

---

## 2.3 Recommendations

National Health Accounts, prepared for the first time in the Dominican Republic, will serve as the basis for monitoring the effects of the upcoming reforms. One of the principal effects that

---

<sup>1</sup> Based on the estimate of the National Health Accounts done by the Central Bank. Household spending comes from the Health Spending Module of the Demographic and Health Survey (ENDESA, '96). Still to be processed are special research studies on the insurance subsector and the non-governmental organizations, which will not significantly alter these percentages.

such accounts will make it possible to analyze are the changes in the composition of financing and, along with them, their effects on equity and the population's standard of living. For example, if through the reform the government's health services improve in quantity and quality, it is very likely that the population with few resources that now uses private services will cease to do so; this would increase the availability of family resources for other purposes, such as improving nutrition. Similarly, greater health insurance coverage, both public and private, would also lead to a better quality of life for the Dominican population.

The preparation of National Health Accounts should represent an ongoing effort in the statistical compilation of data. In this sense, it is recommended that a National Commission on National Health Accounts be created to take charge of following up this process. This Commission would include the Department of Public Health, the National Planning Office, the Executive Commission for Health Sector Reform and the Central Bank of the Dominican Republic. This latter institution would continue processing the data on the basis of the information prepared especially for this purpose by the preceding institutions.



---

## 03. Ecuador

---

### 3.1 Objectives of National Health Accounts

The fundamental objective of National Health Accounts (NHA) is to provide a description or overview of the origin of funds, i.e., their sources, the details of allocation and use of resources, and the channels for distributing the funds utilized in the health sector. A value instrument of this type makes it possible to manage, distribute, and mobilize health sector resources, in that it makes it possible to:

1. Have a complete idea of the structure and financing of the Ecuadorian health sector.
2. Make well-founded decisions based on sectoral realities, making it possible to identify problems and opportunities for introducing changes and thus for implementing and monitoring the strategies aimed at reform.
3. Know the incidence and real significance of health at the national level in terms of Ecuador's gross domestic product (GDP) and other macroeconomic variables.
4. Have a complete idea of the size of the flows and movement at levels that could never be evaluated before.
5. Know precisely the subsectors and levels of the health sector that must be attended to with the highest priority.
6. Establish comparisons and know regional levels of health spending based on a single methodology.

---

### 3.2 Principal Results

- ▲ In 1995, total health spending in Ecuador amounted to over 2 trillion (2,094,414 million) current sucres (US\$816,217,459), an amount that represents 4.6 percent of national GDP.
- ▲ Annual per capita spending for the entire sector during 1995 was 182,759 current sucres, or US\$71.22.
- ▲ During the same year, total household spending as a source of financing rose to 1,018,571 million sucres, a figure that represents 48.63 percent of total national spending on health.
- ▲ Annual family spending, incurred directly by Ecuadorian households acting as paying agents, amounted in 1995 to 692,855 million sucres, an amount that represents 1.5

percent of GDP, 2.6 percent of total household spending, and 33 percent of total national spending.

- ▲ 74.7 percent of household spending is in urban areas, and 25.3 percent in rural areas.
- ▲ The biggest item in household spending on health was for “medications, pharmaceuticals and other perishables,” which accounted for 61.1 percent, followed by “medical care” at 24.3 percent.
- ▲ Direct per capita household spending on health at the national level amounted to 60,459 sucres (US\$23.56). Total per capita household spending on health, as a source of financing, was 88,881 sucres (US\$34.64).
- ▲ Public spending represented 34.78 percent of total health spending in Ecuador for 1995.
- ▲ In 1995, the central government’s health spending, effected through the Ministry of Public Health (*Ministerio de Salud Pública*, MSP), the National System to Eradicate Malaria (*Sistema Nacional de Erradicación de la Malaria*), the National Health Institute (*Instituto Nacional de Higiene*), and the State Center for Supply of Medications and Inputs (*Centro Estatal de Abastecimiento de Medicamentos e Insumos*) amounted to 494,723 million sucres, an amount that represents 23.6 percent of national health spending.
- ▲ In 1995, the MSP spent 453,600 million sucres, of which 16.9 percent was allocated to primary care, 37.1 percent to secondary care, and 45.9 percent to tertiary or specialized care.
- ▲ In 1995, the Ecuadorian Institute for Social Security/Rural Social Insurance (*Instituto Ecuatoriano de Seguros Social/Seguro Social Campesino*, IESS/SSC) spending amounted to 406,895 million sucres. The highest percentage, 36.6 percent, was concentrated in the province of Guayas, with 34.6 percent and 7.3 percent spent in the provinces of Pichincha and Azuay respectively.
- ▲ Spending by enterprises during the same year amounted to 76,396 million sucres, including payments to social security. Contributions to the IESS comprised the largest part of the funds for health contributed by companies (63 percent), followed by private insurance payments (17 percent), and direct payment for expenses to clinics, doctors’ offices, foundations, etc. (3 percent). Spending by companies represented 3.6 percent of total spending.
- ▲ Spending by insurance companies amounted to 75,302 million sucres in 1995, and 53 percent of this went to pay for hospitalization, fees, and surgery, 42 percent for medical visits and laboratories, 2 percent for rehabilitative therapies, and 3 percent for ambulances, prostheses, and orthopedic equipment.
- ▲ Spending by prepaid companies in 1995 amounted to 46,096 million sucres, and the largest portion (55.4 percent) of this spending was allocated to pay for hospitalization, with 22.15 percent going to pay for medical visits, 14.21 percent to laboratories, and 8.2 percent to pay for medications and pharmaceuticals.

- ▲ Health spending on service providers at the national level indicates that 25.91 percent of the total was spent at MSP facilities, while the services of the IESS/SSC accounted for 20.95 percent and pharmacies for 11 percent of total spending.
- ▲ Of total health spending, 2.3 percent is invested in preventive care, while 97.7 percent is allocated for curative treatment. For curative treatment, expenses for primary, secondary, and tertiary care levels represent 32.88 percent, 30.4 percent, and 36.72 percent respectively of total spending. In terms of household spending by level of care, primary care accounted for 42.87 percent, secondary care for 50.85 percent, and tertiary care for 6.28 percent.
- ▲ With respect to the composition of the pharmaceutical market, national production of laboratory medications supplies 38 percent of domestic consumption, with 46 percent coming from imports and the remainder from the informal market.

---

### 3.3 Limitations and Incomplete Results

One of the study's principal limitations is lack of data sorted at the appropriate level. For example, when estimating data on spending by households, problems arose in reconciling annual and monthly spending based on two sources, using an expansion factor. In addition, in the case of urban/rural classification, it was necessary to choose a source of data and adapt it to the level of the data required.

In the case of government spending, it was difficult to determine the amount of transfers for some institutions and thus the information was used with institutional verification. In addition, within the classification by programs, it was only possible to capture the specific amount of MSP spending in four programs that it sponsors.

Health spending by local governments was very problematic in terms of access to data, due to the fact that these institutions still lack structured systemization. Thus we were only able to determine spending for the Municipality of Quito, broken down into direct care and prevention.

A specific limitation was that most data for capturing spending by the MSP and other health institutions is located at the Ministry of Finance and Public Credit, an institution that, due to confidentiality requirements and the fact that it manages a large volume of data coming from all sectors and not just from health, was unable to provide a more dynamic flow of information.

IESS/SSC budgets are done by region. The NHA analysis thus assumed a proportionality criteria based on statistics on outpatient visits and hospital discharges to determine spending at the provincial level.

It was difficult to gather data on companies and private insurance and prepaid health plans, because of limitations in access to information and excessive delay in delivering it. The information is confidential, and access is permitted only for the administrative level.

It also was difficult to determine funding and spending by external cooperation because of the disparate sources of information, the different levels, and the limited systemization. Again,

this required us to make assumptions that we hope adequately answered pertinent NHA questions.

Regarding spending by non-governmental organizations, the complications were also due to the lack of data and necessary linkage with existing sources. It was not possible to include the important contribution of the Church and other institutions such as clubs or social support groups. Finally, we were prohibited from seeing the Armed Forces budget due to reasons of national security.

---

### **3.4 Recommendations**

Health sector reforms in various countries are intended to effectively improve the health conditions of their populations. This requires a fundamental change not only in the sense of providing care “with quality and friendliness” and in the organization and management of facilities so that they can operate effectively and efficiently, but also in the financing of health services so that they can provide more and better quality care in an equitable way.

This is an area in which NHA make a decisive contribution, given that once the goals—such as national insurance for the entire population; implementation of preventive measures; and timely, high-quality health services for all Ecuadoreans regardless of their ability to pay, where they live, and the seriousness of their illnesses—are established, NHA specifically identify the parameters of activities, no matter whether these activities are national or provincial, urban or rural, preventive or curative. The work described here made it possible to obtain some interesting results that we hope will generate both suspicion and expectation: Suspicion, so that in the future those who have more specific information will contribute to greater precision in the accounts. And expectations, to promote the institutionalization of this methodology so that this analysis does not become an isolated study but rather contributes continually to remedying the lack of information.



---

## 04. El Salvador

---

### 4.1 Objectives of National Health Accounts

Due to the importance of health sector financing and resource utilization in increasing both the efficiency and the efficacy of services, in recent years various efforts have been made to determine the economic dimensions of the sector as compared to the economy as a whole, the sector's contribution to generating sources of employment and investment, and the utilization and application of the financial resources available. These analyses have been realized through the National Health Accounts (NHA) methodology.

The work described below responds to the national need to have information regarding the flows of financing and spending in the health sector, which is important for defining strategies for sectoral reform and for monitoring and evaluating the reform.

---

### 4.2 Principal Results

#### 4.2.1 Health Sector Financing

In 1996, the El Salvadoran health sector received approximately 7,417.7 million current colones, contributed by foreign cooperation, the Ministry of Public Health and Social Assistance (*Ministerio de Salud Pública y Asistencia Social*, MSPAS), the Salvadoran Social Security Institute (*Instituto Salvadoreño del Seguro Social*, ISSS), Teacher Welfare, Military Health, the ANTEL Hospital, insurance companies, the Maternal Health and Infant Survival Project (*Proyecto de Salud Materna y Supervivencia Infantil*, PROSAMI), and households. Among these sources, households contributed (directly or through the MSPAS and ISSS) 53 percent of total health sector financing. The MSPAS and the ISSS contributed 43 percent. The principal sources of MSPAS financing were the Ministry of Finance (1,309.5 million colones) and foreign cooperation (333.6 million colones), while the sources for the ISSS were private companies (767.5 million colones) and households (418.1 million colones).

#### 4.2.2 Health Sector Spending

According to estimates, health spending in El Salvador in 1996 amounted to 6,832 million colones, equal to 7.3 percent of the gross domestic product (GDP). This figure makes El Salvador average in terms of health spending, among Latin American and Caribbean countries. This amount also represents an annual per capita expenditure of 180 colones (US\$135).

Those who paid health care providers were public institutions, particularly the MSPAS and the ISSS, and private institutions, including health insurance companies, PROSAMI, and

households. The ratio of spending between public and private institutions was 41 percent to 59 percent.

Without using or filling out the Harvard NHA system matrices, it is only possible to present the distribution among providers and types of services, as well as the expense items for the MSPAS and the ISSS. This information is found in Figures 1 and 7 and in Table 18, and also in various annexes to the final report.

### 4.2.3 Limitations and Incomplete Results

There are no specific data available to correlate all the series of results, for example, all the paying agents with all the types of services and other uses of these resources. Unfortunately, the information did not allow us to differentiate the flow of this financing to the public and private sectors, which would prevent the double counting of the expenditures.

The consolidation and analysis of health sector spending should include all public or private institutions that carry out health activities—preventive and curative—as well as the agencies responsible for environmental health, provision of drinking water, and treatment of solid wastes. However, given the limited information, it was not possible to include all these institutions. Consequently, the results presented here only include information on spending by the MSPAS, the ISSS, health insurance companies, 12 non-governmental organizations involved in PROSAMI, and households. The analysis was able to estimate that health sector spending by Military Health and Teacher Welfare but could not disaggregate it to any degree. The exclusion of spending by institutions such as the Ministry of the Environment, the National Association of Aqueducts and Sewers (*Asociación Nacional de Acueductos y Alcantarillados*), the municipal offices, and non-governmental organizations involved in the environment reflects the limitations in the information as explained in detail under the methodological aspects of this research.

---

## 4.3 Recommendations

The results obtained from the NHA analysis provide the opportunity to reach conclusions and to formulate recommendations to contribute to health sector reform. These conclusions and recommendations include the following:

1. In 1996, health sector financing had a strong private component, the principal source of which was “out-of-pocket” contributions from households. This highlights the problem of inequity in the system, especially when we consider the fact that families living in extreme and relative poverty contributed nearly 40 percent of this financing.
2. National health spending puts El Salvador among the average countries in Latin America, and represents 7.3 percent of GDP, indicating that the health sector uses a relatively high percentage of national wealth without providing the coverage levels required.
3. The public/private ratio in health spending (41 percent to 59 percent) illustrates the relative importance of the private component in financing health sector spending, and this fact must be considered in defining sectoral policies on financing and resource allocation.

4. A high percentage of public spending on health goes to labor compensation and operating expenses of health care facilities. Inflexibility in these budget items prevents savings and re-allocation of resources to other critical items (medications, biomedical equipment, etc.) in the health sector.
5. Similarly, in both the social security system and the national services network, a high volume of public sector resources has been allocated to hospital care, while primary care has received fewer resources. This situation must be examined, as resources are not being invested in the most effective and least expensive care in the health sector.



---

## 05. Guatemala

---

### 5.1 Objectives of National Health Accounts

The implementation of initiatives aimed at increasing the efficiency of the health services, cuts in the resources available for the health sector, and the increased costs of care have necessitated discussion of the twofold topic of redirecting spending and diversifying financing in health.

Many countries have experimented with reforms that introduce new systems of financing and establish procedures for close monitoring of resource utilization in the health sector. Policymakers thus increasingly demand criteria and data that allow them to choose appropriate implementation plans.

The study of National Health Accounts (NHA) offers a highly valued opportunity to document the reform process through which the sector is going, as well as to reinforce the flow of decisions that will have to give direction and continuity to this process of change. This is why the Sectoral Planning Unit of the Ministry of Public Health and Social Assistance has joined the regional initiative to study national accounts.

In order to achieve the established objectives, the program is subdivided into three parts: institutional development, sectoral financing, and the expansion and improvement of health services.

The component directed to sectoral financing seeks to encourage private and non-governmental participation in health service provision, through financial decentralization and implementation of self-sustaining programs to increase the supply of health goods and services for the population. These reforms confront the problems involved in redirecting spending to favor preventive care and reallocating resources to populations overlooked in terms of access to services.

---

### 5.2 Principal Results

In 1995, national health spending in thousands of quetzales was 3,108.085 (3.65 percent of gross domestic product [GDP]). In 1996, the figure rose to 3,632,322 (3.8 percent of GDP), and in 1977 it rose to 3,852,794 (3.97 percent of GDP). (See Table 6.)

The sources of financing for health spending in 1995 were the government, 24 percent; foreign cooperation, 4 percent; households, 55 percent; and companies, 17 percent. (See Table 7 with the results for the years 1995–1997.) It is obvious that households represent the most important source of health spending. For the period studied, we note a moderate tendency toward increased participation of private or non-governmental organizations (NGO), due in part to the greater participation of NGOs and private health insurance plans, as well as the contracting of state spending through various agents. It can be seen that spending flowed primarily through

household funds, followed in importance by the Guatemalan Social Security Institute (*Instituto Guatemalteco de Seguridad Social*, IGSS) and the Ministry of Health. The annual figures in quetzales for the matrix of sources and agents appears in Table 8, which is similar to the Harvard NHA Matrix 1. (For the years 1995–1997, see Tables 9.A, 9.B, and 9.C, respectively.) Each institution receives resources from financial sources in different proportions.

The relative importance of health spending by financing agent for the year 1995 was 21.7 percent for the Ministry of Health, 1.7 percent for other ministries, 0.1 percent for the social funds, 25.9 percent for the IGSS, 2.4 percent for the NGOs, 2.4 percent for private insurance plans, and 45.7 percent for households. In total, the gross division of health spending is 49 percent and 51 percent for public and private agents, respectively. (See Table 8.)

Health spending per inhabitant was US\$57 in 1995, US\$61 in 1996, and US\$60 in 1997.

---

### 5.3 Limitations and Incomplete Results

The study has information for the period 1995–1997. The most complete and reliable data correspond to the public sector, since they are based on printed reports on budgetary performance issued by the State Accounting Office. The information on NGOs corresponds to reports from these organizations for the inventory done by the United Nations Development Program/Ministry of Health, cited previously, and the field study by GSD Consultores Asociados under contract to the Ministry. In order to prepare the matrices, it was necessary to estimate some data on NGOs, as described in the methodological annex. The information regarding out-of-pocket expenses was reconstructed using the data base from the survey of health services demand and spending conducted by the National Statistics Institute (*Instituto Nacional de Estadísticas*) in 1997. The same annex presents the details on some estimates done for prior years.

The 1997 survey was conducted in four departments in the southwest region of the country. This information was used as the basis for estimating national values for household spending, based on the socio-demographic survey of 1989 and assuming an increase in health spending associated with greater total household spending and depending on rural-urban areas of residence. It will be possible to improve the estimate with the data captured by the new survey.

---

### 5.4 Conclusions and Recommendations

The results of this first exploration present important challenges in the health sector reform process. It seems that, in order to improve equity in the delivery of services and efficiency in the allocation of spending, it will be necessary to radically modify the financing mechanism so that the dispersion of intermediary agents is reduced and to achieve a closer relationship between the contribution to health and the receiving of benefits. In addition, an immediate task for the state is to generate a regulatory framework and a scheme for accrediting providers who give the population access to health services by means of a strengthened role of the Ministry and the IGSS as financial agents of the health system. Universal access to a basic group of insurable health goods, and complete compliance with state obligations in the area of public health, necessitate radic

al changes in the flow of financing and spending in health.

---

## 06. Mexico

---

### 6.1 Objectives of National Health Accounts

The process of reforming the National Health System (*Sistema Nacional de Salud*, SNS) has made clear the need to study health spending. This is the objective of National Health Accounts (NHA), which comprise an analysis of the financial resources of the SNS in its different institutional components, both public—social security and services for the uninsured population—and private. These accounts are prepared annually to identify the financial amounts of the SNS and their distribution.

Calculating NHAs represents a useful tool for decision making and follow-up of policies within the sectoral reform. This document presents the updating to 1995 of the NHAs in Mexico. The analysis of health spending is done for both the public and private sectors. This spending represents the financial resources used to raise and preserve the population's health status. The integration of the information presented here includes the various institutions that provide health services, although it does consider the activities of social assistance and benefits.

---

### 6.2 Principal Results

Health spending in 1995 was more than 100 billion pesos (US\$15 billion) and equal to 5.5 percent of the gross domestic product (GDP). The figure shows an increase at current prices that, nonetheless, does not keep up with the increase in inflation, and in fact is a decline for the first time since the 1992–1993 period. Private spending (57 percent) is higher than public spending (43 percent) on health. In terms of the country's entire population, total average spending was \$1,107 per inhabitant, of which \$480 was public spending and \$627 was private spending. The distribution of health spending by type of source in 1995 was: households, 63.6 percent; companies, 21.8 percent; federal government, 13.8 percent; state government, 0.6 percent; and foreign resources, 0.2 percent.

Direct contributions are allocated primarily to the social security funds in which the highest contributions are made by companies. Most of the social security funds receive federal resources with a minimum contribution from state governments. Indirect contributions are applied primarily to the funds for the uninsured. These resources come primarily from the governments, with the federal government contributing the most (93 percent). In effect, in absolute values, this contribution is nearly twice the contribution it makes for social security. State governments contribute 5 percent of the total, which in absolute terms is almost tripled in the contributions to social security. Private funds show the predominance of contributions from households (99 percent), supplemented by companies (1 percent).

The programs analyzed are those proposed by the Secretariat of Finance and Public Credit (*Secretaría de Hacienda y Crédito Público*, SHCP) and are the same as those used by public

institutions to prepare their reports. In 1995, spending by public health institutions was 43,050 million new pesos, distributed among three types of programs: administration and planning; direct care provided to the population, including curative and preventive care; and support programs such as research and training.

The activities of health administration and planning each received 8 percent of total spending. The activities of preventive and curative care together received the largest proportion of resources (72 percent).

There is no record of spending by program in the private health institutions. However, the information on these units shows that their varied size could be related to the diversity seen in the percentage they allocate to administrative spending. With some exceptions, spending on training and research activities is probably limited. This assumes that spending in the private services is directed for the most part to curative and preventive activities.

Within curative activities, the distribution of spending is heterogeneous. On average, 58 percent of resources are directed to hospital care, of which two-thirds are for general hospitalization and one-third for specialized hospitalization. Twenty-eight percent of spending is for general outpatient visits, and 8 percent is for specialized outpatient visits. The remaining resources are allocated primarily to urgent care, emergencies and disasters, and, to a lesser extent, rehabilitation. Within institutions, we note significant variations in the distribution of spending, reflecting the diversity of care that they provide.

In addition to the programmatic classification, the recording of public institutional spending proposed by the SHCP relates to the factors of production. According to this latter classification, compensation represents the item that consumes most resources. This is because, in addition to personnel involved in the final services and the high proportion of specialized health workers, the activities of the SNS require multiple supporting activities. Only in the case of Social Services for State Workers (*Servicios Sociales de los Trabajadores del Estado*, ISSSTE) and Petroleos Mexicanos (PEMEX) does this expense item not consume the highest percentage of resources. This can be attributed to the fact that the payment of fees is recorded as part of intermediate consumption in the general services. In public institutions, the amount of this spending varies between 24 percent and 71 percent. In private services, it represents 28 percent of the total.

The second item of importance is general services, representing between 11 percent and 64 percent of the total. In the case of the Mexican Social Security Institute (*Instituto Mexicano de Seguridad Social*)–Solidarity, spending on materials and supplies is higher than spending for general services, and in the case of the ISSSTE and PEMEX, this latter item of spending receives the highest amount. Private services show an average figure of 32 percent.

In general terms, spending on inputs represents a percentage of spending ranging between 10 percent and 20 percent, but shows a higher percentage in private services, where it reaches 31 percent. Spending on infrastructure consumes the lowest percentage of resources in both the public (3 percent to 7 percent) and private (10 percent) services.



---

### 6.3 Limitations and Incomplete Results

The NHA study methodology is found in Annex 1 of the final report. The limitations of the work are presented there and in other sections of the report.

---

### 6.4 Recommendations

NHA represent a financial information system that analyzes spending quantitatively and qualitatively. Monitoring spending over time will make it possible to evaluate whether policies have a positive effect on improving equity in spending. Annual updating of estimates in Mexico has made it possible to construct a data base that will expand the analysis done to date, including some analyses on the effectiveness of the system.

Within public spending, the resources are concentrated in social security funds, where spending per inhabitant is up to four times higher than spending in the funds for the uninsured. If the calculation is done by user population and institution, the difference in spending is as much as 12 times higher in extreme cases. When analyzing total spending in health per inhabitant and by state, we see differences of up to 10 times; these differences occur primarily at the expense of private spending.

If entities are grouped according to health needs and if mortality in adults and children under five years is used to represent progress in the epidemiological transition, we then see that the greater the need, the lower the spending in health. In particular, backward areas show lower private spending. We also see inequity in the distribution of spending by geographic area and by needs, which highlights the need to redirect financing still more toward entities most in need. It would also be advisable to begin a new direction that will seek to increase the amount of spending on preventive care. It is necessary to increase spending for the uninsured poor, as well as to develop and regulate a public and private market to mobilize private out-of-pocket spending toward prepayment methods that protect family finances.

Although the need and usefulness of the NHAs have been demonstrated, it is clear that these represent a partial tool, and it would thus be necessary to expand the systems of institutional evaluation to enhance the scope of evaluation in the system. This involves the simultaneous conduct of studies on effectiveness, as well as other studies, which will necessarily have to reach levels of disaggregation that make it possible to make decisions at the state level, by institution and by program.



---

## 07. Nicaragua

---

### 7.1 Objectives of National Health Accounts

The analysis of health financing and expenditure—the objective of National Health Accounts (NHA)—is a fundamental pillar of health sector reform. Analyzing the economic feasibility, distributive effects, political advisability, and even the regulatory implications of medical care programs guides the state in making national and sectoral health policies so as to meet the needs of the population with a limited budget.

This study is a valuable tool that allows the authorities to visualize strategic planning of health sector reforms in Nicaragua, with the expectation that resources will be allocated to specific programs or subsystems so as to meet the objectives of efficiency and equity in the sector, for the benefit of the most vulnerable sectors of the population.

---

### 7.2 Principal Results

#### 7.2.1 Matrix 1

*Identify the sources of financing and their level of participation in the national health sector, and indicate the amount of the resources that these financing agents allocate to each of the health funds.*

The source of health financing is a tripartite mix of the public, private, and foreign assistance sectors, in which the first two predominate. In 1995 and 1996, together they contributed 79.7 percent and 82.3 percent respectively of total health care sector financing.

In 1995, the public subsector financed 41.3 percent and the private subsector financed 38.4 percent. In 1996 the public sector contribution remained essentially the same (41.5 percent) while the private sector contribution rose to 40.8 percent. These figures confirm earlier analyses by the Pan American Health Organization and the World Bank, which showed a higher percentage of expenditure by the public sector. The decline in foreign assistance financing, which fell from 21.3 percent in 1995 to 17.7 percent in 1996, was compensated for by the increase in the private sector contribution.

Public sector agencies—the Ministry of Health (*Ministerio de Salud*, MINSA), the Nicaraguan Social Security Institute (*Instituto Nicaragüense de Seguridad Social*, INSS), and others—administered 68 percent of health care spending in 1995. In 1996 their spending increased slightly (0.4 percent).

The percentage of spending by households, which directly manage their own resources through the direct payments they make to the different providers (virtual funds), was similar in

1995 (32 percent) and 1996 (31.6 percent). It is assumed that this small decline could be due to maturation of the INSS Insurance Health Model and its increasing share in sectoral financing.

### **7.2.2 Matrix 2**

*Identify the use of the resources that agents transfer to the different providers of health sector services. Quantify the resources allocated to the various health services providers.*

The results detail the allocation of resources by facility and level of care: primary care (health centers, health posts, clinics), secondary care (hospitals, polyclinics, and national referral centers), and pharmacies. Then the following are analyzed:

- ▲ the contribution or allocation of resources from agents to providers,
- ▲ the amount of the resources that health services providers allocate or utilize by institution and level of care, and
- ▲ the identification of characteristics of the public/private mix in the delivery of health services.

On average, 63.1 percent of the financial resources allocated to service providers in 1995 went to public providers and 36.9 percent went to private providers. This relationship remained unchanged in 1996, with public and private providers receiving 62.6 percent and 37.4 percent, respectively.

In the primary care service network, public providers consumed an average of 23 percent of total financing in each year. Consistent with its designated role in Nicaraguan society, MINSA used the most resources, 20.4 percent, for these services. Secondary care utilized 26.5 percent, while specialized ambulatory care and the national referral centers used 11.7 percent. Private providers recorded average spending of 12.6 percent in clinics, 3.6 percent in hospitals, and 21.5 percent in pharmacies, where the weight of direct spending by households is evident.

### **7.2.3 Matrix 3**

In general in 1995 and 1996, there were no significant variations in the use of resources by programs or types of services: On average, 78 percent of health spending was allocated to curative care programs, followed by health promotion and disease prevention programs (15 percent). Rehabilitation accounted for barely 0.6 percent of total spending.

In 1996, due to financial constraints in the public subsector, in real terms households spent 31.7 percent—approximately one-third—of their contribution on ambulatory and hospital care. More specifically, 21.1 percent was allocated to curative ambulatory care; the remainder covered hospitalization contingencies. It is important to emphasize that the population uses public sector (MINSA) services when it needs specialized hospital care (15–16 percent of spending), probably due to its high cost in the private market, while for general ambulatory visits they go to private doctors' offices (more than 16 percent of spending), resulting in a relationship that is inversely proportional between the two subsectors.

Finally, MINSA is the principal agency in charge of promotion and prevention activities: Approximately 16 percent of its total spending goes to this function, with 13–14 percent directed to the primary care level. The INSS makes a marginal contribution (2 percent on average), most of which is aimed at preventing accidents in the workplace.

#### 7.2.4 Matrix 4

In 1995, the budgetary line items to which the most resources were allocated were those relating to materials and supplies (42.5 percent) and personnel services (34.3 percent). In 1996, these figures were similar: 37.6 percent and 36.8 percent, respectively. However, it should be pointed out that the public subsector allocates more resources to personnel services than to any other item, so much so that it spends on personnel more than twice what it allocates to medications. The institution that consumes most personnel resources is MINSA, given that there are fewer personnel in other health-related agencies and that the INSS has no health facilities but rather contracts services to public and private bidders.

In the private subsector, households assume responsibility for purchasing the medications not provided by the public sector. In 1996 they allocated 21.97 percent of their resources to medications, assumed to be mostly for curative purposes. This is equal to more than one-fifth of total financing in the sector.

Line item 4 in the matrix, consumer goods, shows a high level of expenditure (19.9–23.3 percent). This financing comes primarily from foreign assistance projects (loans and grants) that are directed to the construction and rehabilitation (improvements and equipment) of health units.

---

### 7.3 Other Results

In general terms and for purposes of comparison with other systems, other aggregate indicators of the Nicaraguan health sector can be summarized as follows:

Description	1995	1996
Per capita spending (in US\$)	56.46	58.11
Public Health Spending/Public Spending	28.2 percent	29.6 percent
Health Spending/GDP	12.9 percent	13.2 percent

An important aspect that must be clarified involves the relationship between health spending and the gross domestic product (GDP). In Nicaragua, the year 1980 is used as the base year in historical series. This makes it possible to assume an undervaluation of GDP in real terms, and the relevant authorities are fully aware of this problem. Currently the Central Bank of Nicaragua (*Banco Central de Nicaragua*) operates by deflating the historical series with a base year of 1994. For the purposes of this study, which uses the official figures, the comparison expresses a very high level in health spending over this aggregate indicator in comparison with other countries. Therefore, we should consider per capita spending in dollars a more equitable measure of sectoral financing.

---

## 7.4 Limitations

The information gathering and processing done for this analysis made it possible to identify problems that would hamper the process of institutionalizing National Health Accounts, both in the health sector in general and in specific institutions. It also confirmed the need to standardize the variables both in terms of budgetary structure and service provision, so as to permit greater disaggregation and depth in the analysis, particularly regarding the valuation of the resources allocated to the country's priorities such as promotion and prevention in vulnerable groups and territories. With respect to the analysis of data on private spending, one of the elements not available was estimates by territory.

Differences were recorded between the performance data from the Ministry of Finance (*Ministerio de Financiación*) and health institutions (including MINSA), because there still were accounts to be balanced when the financial reports of the institutions were prepared. Time limitations prevented more careful verification. Also, certain critical events that occurred in 1995—numerous cases of cholera and measles and the appearance of leptospirosis—required extra-budgetary allocations that were paid out until the following year.

The role of some health care institutions in the government sector, such as the INSS, does not include the service provider function. This makes it difficult to identify the types of services and budget lines that they finance (matrices 3 and 4), since what they submit is the per capita amount in accordance with the population assigned to public and private insurance companies.

In addition, while it was possible to systematize much historical financial information for the government sector for the period 1991 to 1996, certain inconsistencies still prevented complete analysis of the entire period. Thus, the Nicaraguan NHA project focused on the years 1995 and 1996.

Problems faced in working with data on private sector health care was lack of access to all the institutions that finance health services, for example, non-governmental organizations. Other institutions record information only by the object of spending, inadequate for identifying and analyzing information in the NHA methodology. However, it is hoped that it will be possible in future to have access to these data so as to allow complete analysis of health spending.

Using the data obtained, historical series were constructed by institution, and later for all institutions and their total per year. The 1980-based GDP deflator is applied to these data, because the series of indicators with a base year of 1994 is still not available.

---

## 7.5 Recommendations and Conclusions

The study presents only the results of health sector financing in Nicaragua for the years 1995 and 1996. During this period, there were slight variations in the percentages of the public and private sources of financing. While the proportion of private financing increased slightly in 1996, due to increased contribution from households and the development of private health companies, the proportion of public financing remained slightly greater, due primarily to investments in infrastructure by the Ministry of Health.

Regarding the allocation of resources among various levels of health care, the analysis shows decreased spending on promotion and prevention programs; for every cordoba allocated to promotion and prevention, five cordobas are spent on curative care. Still, the volume of resources used for promotion and prevention is high in comparison with other countries in the region (Ecuador, for example, allocates 11 percent and Mexico 7 percent).

In addition, since the early 1980s, the stated strategy of Nicaraguan health policy gives the highest priority to primary care. However, the data show that greater allocations to secondary care continue, due to the urgent need to develop hospital infrastructure and equipment. Nonetheless, this greater use of resources at the secondary care level is relatively satisfactory if the distribution of resources is compared with the other Central American countries.

In terms of other spending allocations in 1995 and 1996, there is a slight increase in personnel services, especially in MINSA. The increase is due in part to increased staffing promoted by projects of collaborating agencies. With respect to consumer goods (physical infrastructure and equipment), the increase is very significant and is the result of investments in buildings and construction that began in 1996, particularly in MINSA health units.

The participation of households in health financing is increasing. There is clear evidence that household spending has deepened the inequity in the sector, as households with fewer resources are proportionately incurring greater expense than those with more income.

These inequities should force those entities that participate in health sector financing, above all the public sources, to promote equitable distribution of increasingly scarce resources to the most vulnerable sectors so as to reduce the lack of equity, access, and efficiency.

It is recommended that an NHA Technical Unit be formally established with the participation of public, private, and foreign assistance institutions, as should the definition of duties, lines of authority, resources, and interrelationships with the Financial and Foreign Cooperation divisions. The relationship of those coordinating health sector reform should be defined.

Research studies such as “The Private Supply of Health Services” and “The Supply of NGO Health Services” should be promoted to contribute to development of the NHA system. Such studies make it possible to integrate information and to process and analyze the data on health financing and spending.

At the same time, there should be coordination with the Foreign Cooperation Division and MINSA Administration on the development of a classification making it possible to integrate their information according to the technical requirements of the NHAs.

Generally, in analyzing private spending, the income and spending survey to be conducted in 1998 and the standard of living survey to be conducted in 1999 will be used as special inputs. In this regard, coordinating activities have been carried out with the agencies promoting these initiatives to include a member of the NHA unit in the development of tools for gathering data and to introduce a specific section to indicate spending by households in health care.





---

## 08. Peru

---

### 8.1 Objectives of National Health Accounts

To identify the volume of financial resources with which the health sector operates, so as to determine which sources provide the funds and in what proportions, how they are allocated, and what the financial needs are.

---

### 8.2 Definition of the Sector

The health sector includes the public and private sector institutions that establish standards and regulations and provide human health services. It also includes activities directed to nutrition, sanitation, the environment, quality control of medications and foods, etc. which, in accordance with the designation of administrative responsibilities, are part of the health sector.

Complementary activities include the manufacture, importing, distribution, and sale of medications, therapeutic products, and orthopedic devices; the manufacture of medical equipment; and the construction of health facilities. The insurance companies—offering medical, school, and personal accident insurance—are also considered complementary agents.

---

### 8.3 Coverage

Health coverage is provided by the financing institutions (sources), the intermediary institutions (funds), and the health services provider institutions, as listed below:

- ▲ *The Government*, which acts as the receiver of revenues, distributor of resources and provider of health services, administrator and director of the sector, through its agencies that carry out spending and are responsible for implementation;
- ▲ *The Peruvian Social Security Institute (Instituto Peruano de Seguridad Social, IPSS)*, which acts as the receiver of funds and provider of health services;
- ▲ *The insurance companies*, which operate as receivers of funds (they receive premiums and purchase or pay for health benefits through indemnities to their insured);
- ▲ *The financial companies*, which act as agents paying interest on immobilization of technical reserves in the case of the IPSS;
- ▲ *The companies that produce, distribute, and market (pharmacies) pharmaceutical products and medicines*, in their role as suppliers of products that complement medical care;
- ▲ *Companies as providers of private health services and as self-producers of health services for their employees and their dependents*. In the first case, their funds come

from the rates charged to households, to insurance companies (indemnities), and to the companies that have private funds to cover the health expenses of their workers and their dependents. In the second case, the health services provided are financed with funds from the company itself;

- ▲ *Private non-profit institutions* that provide health services and are receivers of donations (domestic and foreign) and the symbolic rates they charge households;
- ▲ *Employers in general (public and private)*, which act as providers of funds for the Social Security Fund through compulsory contributions; and
- ▲ *Households*, which partially financed the Social Security Fund until 1995, and which finance the private funds of companies, participate together with their employers in financing the premiums paid to insurance companies, and finance—through purchase of medications—the companies that produce, distribute, and market pharmaceutical products and medicines. Households, as the final beneficiaries of health services, also finance with their out-of-pocket expenses paid to the public fund (public sector health services and medicines) the private profit-making companies (purchases of health services and medicines), social security (services for the uninsured), and the insurance companies (premiums).

---

## 8.4 Results

In 1995, the sources that provided the resources to finance the health sector were as follows: households (37.3 percent), the government (34.4 percent), companies (27.7 percent), and foreign sources (0.5 percent), whose contributions are received directly by the non-governmental organizations. In 1996, the sources kept this same ranking, but changes are noted in the relative participation of each source.

In 1995 and 1996, the largest proportion of resources was allocated to providing public services to the “uninsured” population, with amounts equal to 38 percent and 41 percent, respectively. The private funds of for-profit institutions represented the second most important component, with 34 percent in 1995 and 33 percent in 1996. Third place was occupied by the IPSS with 27 percent in 1995 and 25 percent in 1996. Last place is held by the private non-profit sector, with 1 percent recorded in both years.

With respect to the institutions providing services, 85 percent is allocated to health services delivery and the remainder represents expenses for activities in nutrition, sanitation, the environment, and “not for services.” Of total health spending, 94 percent represents current spending and the remaining 6 percent represents investment expenses.

Per capita spending in health, in constant terms, increases from 218 new soles in 1995 to 263 new soles in 1996. As a percentage of gross domestic product, health spending increased from 3.9 percent in 1995 to 4.2 percent in the following year. An increase of 8 percent in real terms was recorded in health spending for the subsector that provides services to the uninsured population.

In addition, it should be mentioned that approximately 45 percent of the country’s total spending occurred in Lima and Callao—where 32 percent of the population is concentrated—and

the other 55 percent represented the remaining departments where approximately 68 percent of the country's population lives.

---

## 8.5 Principal Limitations

Basic information on the private sector is scarce and of poor quality. Surveys do not provide adequate coverage and the results are not always representative at the level of the health subregions. Studies and research, in some cases, only cover the geographic areas where the programs and projects are operating.

It is important to mention that there are various cases of under-estimation of health spending because there is no information available on:

- ▲ private subsector investment in health;
- ▲ the participation of non-institutional groups (healers), although this information can be partially captured by the demand side and the health activities of assistance agencies like the Red Cross and fire brigades;
- ▲ individual and community volunteer work, both in terms of service delivery and maintenance of the infrastructure; and
- ▲ domestic and foreign donations.

---

## 8.6 Recommendations

Optimize the use of both domestic and foreign resources, promoting studies, research and specialized surveys with national coverage and subregional and/or micro-regional representation. This would make information at the national level available at a marginal cost.

The conditions for establishing a system of National Health Accounts exist. The National Statistics and Data Processing Institute is in the process of adapting its national accounts to the 1993 System of National Accounts approved by the United Nations, and in the health sector, there have been studies and research conducted in recent years that substantially improve the availability of information.